



New Brunswick Soil & Crop Newsletter



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Nappan has beef in its bull's eye

Last August, a field day was organized at the AAFC Nappan Research Farm and the Maritime Beef Test Station. The Maritime Beef Council in collaboration with Agriculture and Agri-Food Canada (AAFC) wanted to showcase the research done both in beef genetics and in forage production and pastures. It was well worth the trip for those who attended.

The research on beef genetics in the Maritimes is spearheaded by the dynamic Dr. Yuri Montanholi and his band of merry graduate students. The fact that students from all over the world are interested in being a part of his team speaks volume about the quality of his



Pasture at the Nappan Research Station

research. Dr. Montanholi, a veterinarian from Brazil, was appointed to the Beef Chair at the Dalhousie Faculty of Agriculture in Bible Hill in 2013. The scope of his program is wide, but with a main focus on the genetic linked to feed efficiency. Some of the topics covered were: bull and heifer sexual maturity; assessment of health status; use of heart rate

assessments to improve feed efficiency; advanced analysis of blood composition and beef cattle genomics. For those who could not attend the field day, but would like to know more about his research, there is a video online well worth watching at <http://9slides.com/Talks/Feed-Efficiency-Dr-Yuri-Montanholi>.

The Nappan Experimental Farm still keeps up its good work in forage and pasture research after 117 years of existence. Their projects focus on pasture mixtures, nitrogen fertility for pasture mixtures, forage breeding evaluation trials, testing forages for bio-fuel production and the regional forage cultivar evaluation

Upcoming Events

Northshore

Hillmar Farm Open House
Lely robots and barn expansion
October
Hillmar Farm
252 DeGroot rd, North Shannonvale, NB

Kings County

Sugar Beet Harvest Field Day
See sugar beets being harvested and talk on sugar beet production
Mid October
Perryhill Farm
109 Perry Settlement rd., Perry Settlement, NB



Riordon: showing Catros disc angle set.



Bill: Planted. Left - fall and spring till. Right - spring till only.



Bill: Planted. Left - no till. Right - spring disc only.

Increased winter cover, reduced tillage passes

Let's take a quick look at what some farms were doing this year to reduce their use of iron, work the soil less and maintain crop production.

Ryan Taylor and Riordon Farms used the Amazon Catros this spring. A spring demo was held in Ryan's field showing the ease and speed with which the wintered corn stubble could become a seed bed using the Catros. The corn crop is not yet harvested but he saved significant time and expense in land preparation. Typically the Catros is used on sod ground which has been fall sprayed with herbicide. Due to timing issues this spring, the Riordon's sprayed and two weeks later used their 4m

wide Catros in half of an established sod field. The other half was plowed and then disced. Pre-harvest barley samples and observations indicate the Catros tilled area produced more barley head weight and straw. We hope to collect more data at harvest.

A Great Plains minimum till seeder sparked William Duivendoorn to compare grain tillage options. In one field 3 options were tried. (1) fall disced, spring res-tilled, then a shallow disc pass. (2) spring disced. (3) had no tillage prior to planting. From a post-emergent population count, the highest count was spring tilled. The fall tilled area had 92% of the spring till. The no

till count was 82%. The spring tilled area had a higher yield and longer straw length. The no-till section yielded 15% less with a significant reduction in pre-plant expense. Bill feels that the no till results could be improved with a pre-plant herbicide, increased down pressure and slower ground speed. Another field was split between spring res-till and discing. The disced portion yielded higher.

The producers in the North Shore area are innovative and continue to improve their farming practices. The above examples are just a few of those tried and shared to spark ideas.

Joan Parker, P.Ag.

Provincial and agro-environmental club updates

Carleton county Agro-News – Susannah Banks, P.Ag.,

Carleton County members have had a number of recent field days. Peter Scott held a field day at the forage variety evaluation site in Richmond Corner to talk about the work being done there; there was a grain harvesting and grading workshop in August; and in early September there was a field day to look at the Black Label trials. Data from the

Black Label trial, which looks at the ability of this organic acid product to increase the availability of phosphorous, will be presented in the annual report.

Maureen is moving on to a position with Department of Natural Resources and we wish Maureen all the best in her new position.

NBSCIA is in the process of

looking for a new club agrologist. Until such time as a new agrologist is found, please direct all requests for service through the provincial soil and crop office at nbscia@nb.aibn.com or 454-1736.

NBSCIA Agro-News – Susannah Banks, P.Ag.

Over the summer NBSCIA was involved in some work on previously approved projects and has received funding for an additional project: “Effects of foliar mineral oil and insecticide application on spread of strawberry viruses”.

The cereal and oilseed variety evaluation field day was held in Hartland, on July 30th and was well attended.

The Farm of the year judging took place from July 30th - Aug 1st with Bonar Morton, Fraser McCallum and Kevin McCully as judges. The Farm of

the Year banquet will be held on February 26th at the Atlantic Host in Bathurst. Congratulations to all the candidates and best of luck in the competition.

David Dykstra started working as the Provincial Forage and Livestock Feed Specialist, in July from the Sussex office. We are looking forward to working closely with him in order to expand on the forage work we are involved with.

NBSCIA had 3 summer students who assisted the club agrologists with their work

load. Thank you to the federal and provincial programs that provided the funding: Student Employment and Experience Development (SEED) and Canada Summer Jobs (CSJ).

We have opted to have one provincial quarterly newsletter with input from all of the club agrologists rather than many individual local newsletters. As we are trying it out, feedback would be appreciated.



Cereal and oilseed variety trials

Susannah Banks
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Central Agro-News – Amy McFadgen, P.Ag.

Weather Data

This growing season, a large chunk of my time has been spent calculating and tracking the data from the weather stations that we have been monitoring weekly across members' farms. This has proved that monitoring regularly can be easily done. There have been a few challenges with power outages, but we have still been able to keep the data relevant. There is some interesting data that has stood out to me over the season. Millstream was one of the leaders in GDDs and CHUs, at the beginning of the season. In

August, the total amount accumulated for GDDs and CHUs has slowed down and it is no longer a leader. Also, there certainly was a difference in rainfall in the various locations. Nobody has caught up with Penfield after all the rain it received in May.

Once the tracking is completed, we will be linking this data to harvest times and crop quality. Then, as a requirement from the funding program, we will be writing the final report. This winter, we would like to discuss future projects with collaborators. If producers

have any suggestions, we always welcome input. I hope you are enjoying the reports!

Twilight Meeting

The Central Club held a twilight meeting to allow producers to look at a Forage Peas and Oats mixture demo that was underseeded with the forage mix used in the rest of the field. The bag of Peas and Oats seeds was donated by Co-op Atlantic. The mix did grow, but it did not establish as well as expected. On the other hand, it certainly did help with the weed control within the field.



Forage Peas and Oats mixture. (July 8th, 2014)

Special thanks to Co-op Atlantic for the seed donation and to Richard and Carol Boonstoppel for their collaboration.

Amy McFadgen, P.Ag.
Feel free to contact me on any matter
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Kings county Agro-News – Nadine Simpson, P.Ag.



Forage Day at Perryhill Farm (August 23rd, 2014)

Our Forage Day was held at Perryhill Farm on Aug 23rd and was a huge success with around 85 people in attendance. People were able to see various equipment demonstrations, view the sugar beet plots and learn about the Perry’s grass program. We would like to say thank you to the following businesses who sponsored our event: PotashCorp, Cavenish Agri-Services, Co-op, Arbing Equipment, Green Diamond Equipment, Shurgain, FCC, Local and Area Milk Committee, Brookville Lime, Lemken Canada Inc., Peter Degraff of Anderson Equip-

Nadine Simpson, P.Ag.

ment, CAT Atlantic, Mrs Dunsters, EJ Cunningham, and Corridor Resources. A special thanks to the Perry family and friends for hosting the BBQ.

Projects and field work took place over the summer months and we are currently working on a Contingency Plan template to assist members in the completion of a plan for their farm. More details to follow.

For those of you wishing to have field work done this fall, please contact me. All NBSCIA members are eligible to receive a 15% discount on samples sent to the PEI lab. Please

contact me for details.

Fall is a great time to spread Woodash and Lime. If you are looking for spreader rentals, please contact Tom Hoyt at (506)653-8588.

Later this fall, we will be hosting a dinner for our Kings County Farm of the Year, Belleisle Farms. A Notice will be sent out with details on this.



Sugar beets at Forage day.

Moncton Agro-News – Josiane Goguen, A.Ag.



Normal (upper left) vs stunted (bottom) corn growth.

As a new NBSCIA employee, I was faced with an interesting challenge this summer.

I was brought in a corn field where the plant growth in some areas seemed to be stunted and I was asked to find the cause. The first thing that came to mind was nutrient deficiency, so I collected tissue samples for leaf analysis. At a quick glance, the leaf nutrient content from the “good” and “bad” areas of the field didn’t seem to be different. It was then time to look deeper and an opportunity to bring in the NB soil specialist, Pat Toner.

We then proceeded to measure soil compaction with the club’s penetrometer. The penetrometer works by pushing the graduated probe down into the soil until its reads 300 psi and then looking at the reached soil depth. It is common to hit 300 psi around 6” because, over the years and when the ground is wet, plowing can create a hardpan at this depth. In this case, our field observations suggested a hardpan at 3”. We found out that the field had been disced at 3” when the ground was wet and therefore a probable cause. Furthermore, digging a hole

showed that the soil was compacted down to 8-10”; Pat recommended to chisel plow at this depth after the corn has been harvested. At this point, it’s difficult to say with certainty that this was the true cause of this stunted growth. Therefore, we will be observing these fields over the next few summers to see if the problem is fixed and if it’s not, to try and find other solutions.

This has been an enriching experience as an articling agronomist and I look forward to facing other similar challenges in the future.

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Word from Chignecto – Marie-Josée Garand, P.Ag.

Once again this summer, a lot of time was spent mapping. After two years, all the agro-environmental club members who wanted their maps have them. These maps have proven to be very useful for doing environmental farm plans and will be key in preparing nutrient management plans.

The latest soil survey in Chignecto dates from the 50s. Considering the maps' scale and the technology available at the time, it's amazing how the data are still accurate. Worldwide, less than 6% of all the land is suitable for agricultural production. The main cultivated

soil serie on the marsh is Acadia. In the Upperlands, Aulac and Tormentine were described as the most favorable locations for agriculture. Already in the 50s, the soil survey mentioned that most of the land within the best series had been cleared, or in the case of the marshlands, reclaimed.

I recently started playing a card game called: "Magic the Gathering". How is this related to agriculture? Lands are the most basic card type in Magic because they are used to produce mana, the game's currency. Some of the better, rarer

land cards come with features that make it worth 50\$, compared to basic land cards that sell for 0.10\$. Good land cards are limited, more expensive and require more maintenance to keep in mint condition. It seems that Magic is one of the few games ever invented that captures the idea that all lands are not equal, and it's definitely something that, as a soil specialist, I appreciate. We are planning to host a workshop sometime this Fall on soil fertility. Hopefully, this workshop and adequate nutrient management plans will help you keep your land in "mint" condition.



Chignecto soil survey map

Marie-Josée Garand, P.Ag.

Northshore Agro-News – Joan Parker

The fall soil sampling has started. Just a reminder that I am limited to 4 hours per farm per year to soil sample. If you need more done, I will show a farm person how to collect them. Up to date samples are vital for good recommendations.

We were pleased to have Karlee Duivenvoorden spend 8 weeks as our summer student. She was very helpful.

Crop Diagnostic Training

I will never know everything that may show up on your fields, not even close—however, by attending the Manitoba Crop Diagnostic

School I learned more about getting to the root of a problem. We even used aerial photos from drones to see early crop variations that could require attention.

North East Soil & Crop

An Open House at Hillmar Farms (likely in October) will feature their two new Lely robots and barn expansion.

Miramichi Soil & Crop

There was no uptake on the effort to organize attendance at the Sussex Field Day. It is hoped that next summer there will be a local event.

Members trying ideas

Often members try new crops on their farms. John Riordon planted an alfalfa, clover and tall fescue mix suggested by Patrice Vincent. He is pleased with the growth.

Mike Bouma planted sorghum. Protein—16.7% protein and 3 cuts. He felt the yield was mediocre. It doesn't like wet ground. This is a heat crop related to corn, Mike thinks it may be just a good emergency crop, not sure.

Other NSAEC members have on farm crop trials this year. An exciting club to work with.



Riordon: June planted 2nd cut. (September 8th, 2014)



Bouma: Sorghum after 1st cut. Taller plants on right

Joan Parker, P.Ag.

Nappan has beef in its bull's eye, continued



Ryan Oulton, Josiane Goguen and Marie-Josée Garand attending the Nappan field day

trials. It is my opinion, as a soil specialist, that the research conducted there has the potential to greatly impact soil conservation. Why is that? Nappan is all about forages. Not only are forages the backbone of the beef and dairy industry in Eastern Canada, but having forage as a part of the rotation is still one of the best possible soil conservation practice. There is just nothing comparable to improve everything from organic matter, to soil structure and erosion reduction. The more land we can keep under forage, the better. The most recent statistics indicate that forage production

still occupies 50% of New Brunswick's cultivated land base (Agriculture Canada, 2011). This is a 5% drop from 2006. From the beef industry perspective, the most important project is probably the one aiming at finding the optimum pasture mixtures for the long-term sustainability of beef production. Surprisingly, the research to establish which forage species mixtures are the best to improve beef production has been sparse. The work done at Nappan is part of a national effort with many research institutions involved. The lead scientist in the Maritimes is Dr. Yousef Papado-

poulos. It is funded under the Beef Cattle Industry Science Cluster and it will be on going for another 3 years. It is expected that the results of this research will allow beef farmers to be able to choose pasture mixtures that will increase beef production per acre.

It's not possible to discuss in detail all the work accomplished there. Factsheets summarising their projects were handed out during the field day. They are not yet available online so please contact your club agrologist if you would like to have the PDFs.

Marie-Josée Garand, P.Ag.

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